

## **APPENDIX A**

$QN_1$ : Queue length in vehicles using Safety Factor of 2.0;  $[(2 \times V \times C) / (3600 \times N)] \times (1-G/C)$

$QL_1$ : Queue length in feet based on  $QN_1$ ;  $[(25 \times QN_1 \times (1+40 / 25 \times T / 100))]$

V: Peak hour volume (vehicles per hour) = 131 (using critical PM peak hour volume)

C: Signal cycle length (seconds) = 140

N: Number of Lanes = 1

G: Green time each cycle (seconds) = 28.5

T: Percent trucks = 3

$QN_1 = 8.1$  vehicles

**$QL_1 = 213$  feet**

Equations based on interpretation of AASHTO Green Book, Page 829. Values based on Blue Ball Properties Transportation Improvement Project capacity analysis.